Food and Agriculture Organization of the United Nations

WHEN WOMEN TRANSFORM FORESTRY

The 4 WINS approach towards equitable entrepreneurship and leadership across the forest sector

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WHEN WOMEN TRANSFORM FORESTRY

The 4 WINS approach towards equitable entrepreneurship and leadership across the forest sector

by

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ABBREVIATIONS

4 WINS approach	Wider access, Innovation, Natural resources conservation and Sustainable Practices
FAO	Food and Agriculture Organization of the United Nations
FFF	Forest and Farm Facility
GEF-7	Seventh Replenishment of the Global Environment Facility
GIGUP	Gender Equality in Productive Units Programme
GTA	Gender-transformative approach
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
NTFP	Non-timber forest product
REDD+	Reducing Emissions from Deforestation and forest Degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
WeCaN	Nurturing Community of Knowledge Practice for Women in Dryland Forests and Agrosilvopastoral Systems (WeCaN)

EXECUTIVE SUMMARY

Women are central actors in forest economies worldwide. Nearly one billion women depend directly on forests for their livelihoods, yet their contributions as entrepreneurs, innovators and stewards of natural resources remain largely underrecognized and structurally constrained. Persistent gender inequalities - ranging from insecure land tenure and limited access to finance and markets to disproportionate unpaid care burdens and restrictive social norms - continue to limit women's economic potential and leadership in the forest sector. These constraints not only undermine gender equality, but also weaken forest governance, biodiversity conservation and climate resilience.

This paper presents the **4 WINS approach**, developed by the FAO Forestry Division, as a strategic model to advance women's entrepreneurship and leadership across forest value chains while delivering social, economic and environmental gains. The approach promotes four mutually reinforcing pathways: (i) **Wider access** to markets, financial resources and decision-making; (ii) **Innovation** driven by diverse knowledge systems and inclusive leadership; (iii) **Natural resources conservation and restoration** through equitable stewardship; and (iv) **Sustainable practices** that strengthen forest resilience and forest-dependent livelihoods.

Drawing on evidence from diverse contexts, including Africa, Asia and Latin America, the paper demonstrates that when women have secure rights, access to finance and technology, and meaningful participation in governance, they drive measurable improvements in income generation, biodiversity conservation, restoration outcomes and community resilience. Case studies from programmes such as the Forest and Farm Facility, the Sustainable Wildlife Management Programme, the Mountain Partnership and the WeCan Initiative illustrate how women-led enterprises, collective action, digital innovation and gender-transformative approaches can deliver scalable impact.

The paper argues that unlocking this potential requires systemic change. Gender-transformative policies, legal and institutional reforms, investments in care infrastructure, gender-responsive financing and support for women's organizations are essential to dismantle structural barriers. By adopting and operationalizing the 4 WINS approach, governments, development partners and financial institutions can accelerate progress toward inclusive forest economies, resilient landscapes and the achievement of global biodiversity, climate and sustainable development goals.

INTRODUCTION

The 4 WINS approach – Wider access, Innovation, Natural resources conservation and Sustainable practices – has been developed by the FAO Forestry Division to advance women's entrepreneurship and leadership in the forest sector. It promotes four mutually reinforcing 'wins': (i) wider access to markets, financial resources and decision-making; (ii) innovation driven by diverse knowledge and inclusive leadership; (iii) natural resources conservation and restoration through equitable stewardship; and (iv) sustainable practices that strengthen the resilience of forests and forest-dependent livelihoods.

Background

More than 25 percent of the world's population, i.e. approximately 2.1 billion people, of whom around one billion are women, depend on forest resources for their livelihoods. Of the 1.351 billion people who live on less than USD 1.25 per day and who depend on natural resources for employment, around 829 million are women and girls, against 522 million men and boys.[1]

Historically, according to research, men were the exclusive users of forests for economic activities, such as logging, construction and harvesting of high-value products for sale, while women were identified as solely responsible for collecting forest products for household use. However, recently, evidence has contradicted this stereotype and shown that the social patterns of forest use by women and men are far more nuanced.[2] The common view that women are the main collectors of forest products is only partly accurate and varies by region. Latin American men, for instance, contribute more than women to household income from unprocessed products, while in Asia, the contributions are equal.[3] In Africa and Asia, women tend to be the main gatherers of edible wild plants and holders of traditional ecological knowledge, whereas men dominate hunting and timber harvesting. Fuelwood collection follows a similar regional divide: it is largely women's responsibility in Africa and Asia, but it is predominantly carried out by men in Latin America.[4] Recent evidence also confirms that women are not only resource users or household gatherers, but are also active economic agents in forest value chains. As producers, processors and entrepreneurs, they contribute significantly to forest-based enterprises, local trade and the sustainable management of forest resources.[5] Recognizing and strengthening this role is essential for governments and partners seeking to build inclusive and sustainable forest economies.

1 Bolin, 2020.
2 Sunderland *et al.*, 2014.
3 Bottaro, 2021.
4 FAO, 2023a.
5 Tropenbos International, 2024.

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UNEQUAL RECOGNITION
THE HIDDEN BARRIERS TO WOMEN'S ENTREPRENEURSHIP IN FORESTRY

Although women play vital roles across forest value chains, their contributions as entrepreneurs and producers remain largely unrecognized and undervalued. In many contexts, women's enterprises are perceived as informal, low-skilled or secondary sources of income, even when they sustain local economies and household livelihoods. This lack of recognition translates into unequal access to finance, training, markets and infrastructure, preventing women from expanding beyond small-scale activities.[6]

In Liberia, for instance, only 21 percent of forest-related non-farm enterprises are managed exclusively by women, compared to 33 percent exclusively by men, an imbalance that reflects broader regional patterns.[7] Across regions, women are concentrated in low-paid and labour-intensive activities such as harvesting, collection and retail, while men dominate higher-return segments including processing and export.[8]

Moreover, limited participation in decision-making, power asymmetries and persistent inequities in accessing natural resources further constrain women's capacity to scale up their enterprises. In many regions, women still face legal and cultural restrictions on inheriting or owning land, limiting their ability to plant or manage trees with a long-term vision and to benefit from forest-based enterprises.[9]

Most of the world's forests are publicly owned and only 22 percent are privately held;[10] women account for only a tiny fraction of these private titles. In a 2025 review of 35 countries covering around 80 percent of global forests, none met the international standards set under the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) for **women's forest tenure rights**.[11] As of 2024, only 11 countries guaranteed equal property inheritance for women when there is no will.[12] Furthermore, in over one third of assessed countries, statutory law defers to customary rules that favour men, undermining women's rights to forest land, and many women may lose access to forests if they lack a husband, due to patrilineal customs.[13]

6 Meinzen-Dick *et al.*, 2019.
7 World Bank, 2017.
8 Ingram *et al.*, 2016.
9 FAO, 2022a.
10 FAO, 2020.
11 RRI, 2025.
12 MONGABAY, 2024.
13 RRI, 2017.

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RECOGNIZING WOMEN'S KNOWLEDGE
A CORNERSTONE FOR SUSTAINABLE FOREST MANAGEMENT

Across rural areas, women possess unique ecological knowledge of tree species, forest dynamics and biodiversity conservation. As those primarily responsible for the nutrition and well-being of their families, women have a direct and vested interest in preserving forests and the ecosystem services they provide. Their daily interaction with forest resources – collecting food, medicinal plants and other non-timber products – has fostered a deep understanding of how to maintain soil fertility, restore vegetation, and sustain biodiversity over generations.

Women's traditional knowledge is therefore both extensive and essential. Acting as custodians of seeds, forests and water resources, they sustain biodiversity and food security through time-tested practices. Yet, this invaluable knowledge is too often overlooked in formal forestry strategies, undermining both the equity and effectiveness of sustainable forest management.[14]

Women's participation and expertise in forestry are not merely issues of equity and fairness, but are also central to the achievement of global environmental and sustainable development commitments. International frameworks, such as Sustainable Development Goal (SDG) 5 on gender equality, the Kunming-Montreal Global Biodiversity Framework (Targets 22 and 23) and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), as well as the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention to Combat Desertification (UNCCD) and the United Nations Forum on Forests (UNFF) all emphasize that gender-responsive governance is essential for effective conservation, climate action and equitable benefit-sharing.

In many forest-dependent contexts, the forest-climate change-gender nexus is particularly evident. Women disproportionately bear the impacts of climate shocks and environmental degradation, and rely on forest resources and green value chains as an essential safety net during periods of climatic and economic stress. Also, as competition over land, water, fuelwood and non-timber forest products (NTFPs) intensifies, especially during drought or other climate shocks, women are frequently among the first to lose access to forest products and services. This erosion of access undermines both their adaptive capacity and their contributions to climate mitigation through sustainable forest management and climate-resilient entrepreneurship.

The Intergovernmental Panel on Climate Change (IPCC)[15] further underscored that gender-responsive approaches to climate adaptation significantly enhance the effectiveness and sustainability of resilience measures. By contributing to biodiversity conservation, carbon sequestration and sustainable forest management, women are key actors in achieving global climate

[14] Duguma *et al.*, 2022.
[15] IPCC, 2023.

targets, reducing rural poverty, and improving food security. Strengthening their rights, leadership and economic agency is therefore not only a social imperative, but also a strategic requirement for meeting global environmental goals.

Initiatives such as the Lilagle model in Cameroon demonstrate the transformative power of women's leadership: 35 women and girls restored 100 hectares of degraded land, planted over 60 000 fruit trees, enhanced carbon sequestration, and helped shift cultural norms toward the recognition of women's land rights.[16] Women's leadership is a driving force for environmental protection and for social and economic development across diverse landscapes, including drylands, rangelands and mountain areas.

[16] Bibiane Ndjebet, 2025.

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POLICY REFORMS AND CARE BURDENS
CREATING AN ENABLING ENVIRONMENT FOR WOMEN IN FORESTRY

Women's participation in forest economies is often constrained not only by unequal access to resources, markets and education, including in forest-and business-related fields, but also by the unequal distribution of unpaid care and domestic work. As primary caregivers and household managers, women juggle multiple responsibilities that limit their time, mobility and opportunities to engage in forest-based enterprises. Globally, women perform over three times more unpaid care and domestic work[17] than men, a gap that continues to curtail their economic potential and participation in productive activities. To truly unlock women's potential in forestry, gender-responsive policies must go beyond improving market access, financial inclusion and innovation; they must recognize, reduce and redistribute unpaid care burdens that prevent women from investing time and energy in entrepreneurial ventures while also transforming the institutions and norms that reinforce these inequalities.

In Zimbabwe, the FAO-led GEF-7 Dryland Sustainable Landscapes Impact Programme (DSL-IP) is piloting a practical approach that challenges discriminatory gender norms and actively promotes strategies to reduce women's unpaid workload in households while fostering their participation in community decision-making. In eight districts, the Programme strengthens practitioners' capacity to identify and address barriers to women's access to productive assets, such as quality seed and modern equipment, through gender analysis and the use of community scorecards.

Similarly, providing accessible childcare, healthcare and community support services together with investments in infrastructure and transport has proven highly effective[18] in enabling women to participate in and benefit from forest value chains.

A strong example comes from Kenya's rangelands, where 20 women's groups of the Naramat Indigenous Women Arboretum, supported by Samburu Women Trust, are reshaping care and economic opportunity. More than just a grove of trees, the Arboretum offers a holistic model of Indigenous women's empowerment. By integrating care support systems such as childcare, maternal health and community health services, women reclaim time previously consumed by unpaid labour. This free time is reinvested in leadership, entrepreneurship and sustainable enterprise. Women manage nurseries, produce sustainable forest goods and run eco-tourism ventures, transforming Indigenous knowledge into income while restoring the environment. Crucially, the arboretum also builds women's agency in local governance since they actively participate in rangeland planning and decision-making.

When women are supported with time-saving services, technologies and equitable policies, and have control over productive resources, they lead, innovate and strengthen forest economies from the

[17] ILO, 2018.
[18] OECD, 2019; UN Women, 2023; UNECE and UN Women, 2021.

ground up. Closing gender gaps in wages and productivity could boost global gross domestic product by nearly USD 1 trillion,[19] underscoring that investing in care systems is not only a social necessity, but also a powerful economic strategy to enable women's full participation in sustainable forest economies while improving household and community well-being.

[19] FAO, 2023b.

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DIGITAL INCLUSION AND INNOVATION
ADVANCING WOMEN'S CAPACITIES

Reducing care burdens and strengthening social protection systems create the enabling conditions for women to innovate, access new technologies, and engage in digital and financial ecosystems that are increasingly shaping the future of forest entrepreneurship. Digital inclusion has become a prerequisite for women's full participation in modern forest economies. Access to mechanization and innovation is also crucial to reduce women's drudgery and time poverty, both in productive and domestic tasks. Moreover, equipment facilitates value addition and new business opportunities by increasing productive capacity and quality, and enabling women to rent technology to other users. As technology transforms how people access markets, finance and information, ensuring that women are not left behind is essential for equitable and sustainable growth.

In rural areas, however, women remain 19 percent less likely than men to use mobile internet,[20] limiting their access to financial services, e-commerce, training and educational opportunities. Expanding digital infrastructure in remote forest regions, together with entrepreneurship training, financial literacy programmes and digital capacity building, can unlock new opportunities for women entrepreneurs.

Business incubators tailored to women-led forest enterprises and gender-responsive financial mechanisms are key to supporting innovation, knowledge exchange and sustainable growth. Encouraging the return of young professionals to their communities, especially women trained in forestry, digital systems and business management, ensures that local forest economies benefit from enhanced skills, technology transfer and innovation.

Digital and technological innovation are therefore powerful equalizers, enabling women not only to overcome traditional barriers, but also to lead the transition toward more inclusive, resilient and knowledge-driven forest landscapes.

In Zambia, a Young Forest Champion promotes digital inclusion for rural women by training women's cooperatives to use FAO's Open Foris Ground app, enabling them to map indigenous trees and contribute to real-time monitoring of restoration while strengthening their technical skills and leadership in community-led forest stewardship. In Ghana, a Young Forest Champion has trained 635 women and youth farmers in agroforestry techniques, resulting in an average 30 percent increase in farm yields and improved sustainable land management. Similarly, in Peru, a Kichwa Indigenous Young Forest Champion is supporting Indigenous women in restoring native tree species and enhancing habitats for native bees, demonstrating how women's leadership is driving inclusive, culturally grounded and knowledge-based approaches to forest restoration and resilience.

[20] GSMA, 2022.

THE MOUNTAIN PARTNERSHIP BUSINESS INCUBATOR

The Mountain Partnership Business Incubator is a grant initiative designed to strengthen the resilience of mountain and island communities by fostering innovative entrepreneurship in agricultural and textile value chains. Through targeted grants, technical assistance and capacity development, the initiative supports sustainable and inclusive business growth. Within this framework, the FAO Mountain Partnership has provided grants and tailored support to more than 53 producer organizations representing over 10 000 women farmers worldwide, helping them enhance productivity, market access and climate resilience.

To date, the initiative has incubated 107 producer organizations and delivered more than 350 customized coaching sessions. Overall, more than 37 000 farmers and producers have participated in the Incubation phase, and over 20 000 farmers in the Acceleration phase, 50 percent of whom are women and 29 percent, youth.

Sustainable land management has advanced substantially, with carbon-stock restoration implemented on 30 747 hectares, and soil regeneration on 33 629 hectares.

Market performance has also improved markedly: 75 percent of grantees expanded their value-added products, and 47 percent secured access to new markets.

Socio-economic impacts are also evident. Grantees report a 36 percent increase in production and, among for-profit groups, a 72 percent rise in annual turnover. Importantly, 83 percent of grantees have implemented measures to strengthen women's participation in decision-making, demonstrating the initiative's impact on women's empowerment and inclusive local development.

FINANCING PATHWAYS
INVESTING IN WOMEN'S LEADERSHIP AND SUSTAINABLE FOREST ENTERPRISES

Access to finance remains one of the most persistent barriers to women's entrepreneurship in forestry. Despite representing nearly half of the agricultural workforce, women receive only 10 percent of available credit and 7 percent of agricultural extension services globally.[21] Women-led businesses are often smaller, less capitalized and more informal than those led by men, which limits their ability to register officially, access markets, or qualify for state-led programmes and private investment.[22]

Gender-responsive financing mechanisms are essential to bridge this gap. Facilitating bank support through moderate-interest loans, backed by governments and development partners, can help women scale up their forest enterprises and invest in the growth and long-term sustainability of their businesses. Cooperative financing models, tax reductions and entrepreneurship funds not tied to land ownership are particularly important, given that most women lack formal land titles. Group-based mechanisms such as savings and credit groups, cooperatives and producer organizations can pool risk and collateral, enabling women to access larger and more flexible credit packages than they could individually. For example, the Women's Committee of Union of Peasant and Indigenous Organisations of Cotacachi (UNOCARC) in the canton of Cotacachi (Ecuador), under the Forest and Farm Facility (FFF) programme, supported more than 50 women's productive circles by integrating them within the community economy through in-kind credit, as an accessible modality that reduces dependence on conventional finance at the beginning of entrepreneurial experiences.

Initial in-kind credit (e.g. inputs, equipment or services) can gradually transition into more traditional loan products, which is especially accessible if the size of the loan is small and the eligibility and appraisal criteria are responsive to women's realities. These approaches should be embedded in partnerships between women's organizations, the private sector and public institutions, to guarantee not only accessibility, but also access to information and related opportunities available. Rather than conditioning credit on land tenure, financing instruments should prioritize women's entrepreneurial capacity, innovation and leadership, valuing their contributions to local economies and ecosystem stewardship.

SCOOP Don Don Gawani, a women-led cooperative in Kollo, Niger supported by the FAO Forest and Landscape Restoration Mechanism and the French Facility for Global Environment (FFEM), provides a strong example of integrated restoration and women's empowerment. Under the "Forest and Landscape Restoration and Sustainable Land Management in the Sahel" project, 24 women of the 25 cooperative members used small grant funding to modernize Moringa processing and establish fruit tree nurseries for income diversification. The project created jobs for 44 people (36 women and 26 youth), improved nutrition and food security, and promoted soil regeneration through agroecological

[21] FAO, 2019.
[22] OECD, 2022.

practices. By linking forest and landscape restoration to women's economic empowerment, the project demonstrates how restoration investments can deliver both climate resilience and sustainable livelihoods.

Sustainable financing also requires diversification and innovation. As women's production quality and purchasing power increase, direct payments for ecosystem services, membership-based models or levies on marketed products can support the long-term viability of cooperatives and enterprises. Public–private partnerships and multistakeholder co-funding schemes can provide transitional support while fostering sustained investment in social and non-commercial services that strengthen forest communities; for instance, blended financing mechanisms combining public incentives with private and community investments, as demonstrated in FAO's Forest and landscape restoration initiatives,[23] have mobilized capital for reforestation, sustainable forest enterprises and capacity development for women and youth. Such models illustrate how shared financial responsibility can bridge short-term support and long-term sustainability.

By aligning financial systems with women's realities and capacities, governments and partners can transform access to capital from a constraint into a driver of equitable, resilient and sustainable forest economies

[23] FAO, 2015.

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COLLECTIVE ACTION AND ASSOCIATIONS
STRENGTH IN NUMBERS FOR WOMEN'S FOREST ENTERPRISES

Access to finance alone is not enough to ensure women's full participation in the forest economy; collective action and associations are equally essential for building scale, voice and resilience. When women organize through cooperatives, associations or producer groups, they gain stronger bargaining power, improved access to markets, and greater influence over decision-making processes.[24] In Nepal, for instance, women-led forest user groups manage over 1.6 million hectares of community forests, contributing directly to forest regeneration and livelihoods.[25] Similarly, in Zambia, 65 percent of rural women in cooperatives rely on NTFPs for income.[26]

THE SAVANNAH WOMEN FARMERS ASSOCIATION

In Ghana, the Savannah Women Farmers Association (SWFA), supported by the Forest and Farm Facility (FFF), provides a successful example of how collective action empowers rural women to claim rights, expand businesses, and influence local governance. By organizing into well-structured groups, women collectively negotiate access to key assets such as land, markets and finance - resources that are otherwise difficult to secure individually.

Through policy literacy to over 500 women leaders, mentorship for 550 young women by the Female Leadership and Mentoring Academy, peer-to-peer support, and the creation of more than 50 women's groups at the local level, communities and women gained access to flexible financing mechanisms and social protection schemes such as national health insurance and the Feed Ghana Program.

Persistent advocacy led to significant land access gains: in Nanton, chiefs allocated communal farmland to 60 women farmers; in Savelugu, shea parklands were demarcated for protection and enrichment, preserving a key economic resource. The adoption of an intersectional approach by SWFA ensured that single mothers, widows, and women with disabilities benefited equally from innovations, which shifted traditional gender norms and reduced community tensions.

[24] Bolin, 2020.
[25] PEFC, 2014.
[26] Bolin, 2020.

Beyond improving income, collective organization enables women to move up the value chain, engage in policy dialogue, and advocate for legal and institutional reforms that advance gender equality in forestry. By pooling resources, knowledge and influence, women's organizations become catalysts for innovation and inclusive forest governance, ensuring that forest economies grow not only in scale, but also in fairness and sustainability. A key example is Nurturing Community of Knowledge Practice for Women in Dryland Forests and Agrosilvopastoral Systems (WeCaN), the only community platform dedicated to connecting and empowering women across dryland regions through participatory learning, policy advocacy and grassroots innovation exchange. Coordinated by the FAO Forestry Division since 2021, WeCaN brings together over 200 women-led organizations, civil society groups, public institutions, and FAO technical staff from 32 countries, mostly in the Global South.

WeCaN's participatory methodology focuses on the Virtual Knowledge Sharing Cafés, which are inclusive, multilingual, low-tech spaces where women share strategies and shape policy recommendations on topics ranging from climate finance to silvopastoral value chains. Over the past two years, the platform has trained over 100 women on gender in climate negotiations and developed gender-responsive policy tools, and every year, WeCaN members participate in United Nations Framework Convention on Climate Change (UNFCCC) Conferences of the Parties (CoP) delegations and co-lead events on women-led drought resilience at United Nations Convention to Combat Desertification (UNCCD) CoP.

When women receive policy-relevant knowledge and leadership development, their agency in forest governance increases markedly. Evidence from multiple forest-management contexts shows that informed women are able to negotiate their rights, advocate effectively, and gain recognition from both traditional authorities and communities. As a result, women are increasingly elected or nominated to local committees dealing with forests and natural resources, gaining a meaningful voice in decision-making, an outcome further reinforced when they are supported with continuous training, network connections and visibility in leadership roles.[27]

[27] RRI, 2019.

CULTURAL SHIFTS IN GENDER RELATIONS
TRANSFORMING NORMS FOR LASTING CHANGE

While collective organization strengthens women's voice and visibility, lasting transformation in the forest sector requires a parallel shift in social and cultural norms, and the power structures behind them that determine who is recognized, who decides, and who ultimately benefits from forest resources. In many contexts, according to social expectations, men are assigned authority over land, forests and markets while women's knowledge and labour are undervalued or invisible. These norms govern not only household dynamics, but also access to institutions, producer organizations, extension services and community governance, making cultural change a structural prerequisite for achieving equitable outcomes. Evidence across regions shows that efforts to improve women's access to finance, markets or technology yield limited impact when underlying gender norms remain intact.[28]

Cultural transformation emerges when gender-transformative approaches explicitly address these norms through dialogue, collective reflection and behaviour change. Interventions such as positive masculinity training, mentorship programmes, intergenerational learning and community-based interventions challenge traditional assumptions about who can lead, innovate or own assets. When men and boys engage in questioning restrictive masculinities, sharing care responsibilities, and endorsing women's leadership, they contribute to building an enabling environment where women's participation is fully socially legitimate rather than exceptional. This in turn shifts local perceptions of authority and competence, supporting women to take on new roles in forest governance, producer organizations and entrepreneurial ventures.

At the community level, cultural change is reinforced through collective action and visible leadership. When women's cooperatives negotiate land access, manage nurseries or lead restoration initiatives, they redefine community expectations and establish new reference points for what women can do. In addition, intergenerational exchange, where younger women bring digital and technical skills while elder women contribute traditional ecological knowledge, further accelerates this shift by broadening the spectrum of accepted competencies.

Ultimately, transforming gender relations in forestry is not only a matter of changing attitudes, but also of reshaping informal institutions and power relations that govern forest landscapes. Cultural norms evolve when gender-responsive policies, care redistribution measures, inclusive governance structures and community-led initiatives converge to create environments where women's leadership is valued and supported. These transformations have long-term impacts: they enhance social cohesion, strengthen forest governance, redistribute benefits more equitably, and foster resilient, sustainable forest economies in which both women and men thrive.

[28] Elias *et al.*, 2024; Grover, 2025.

THE SUSTAINABLE WILDLIFE MANAGEMENT PROGRAMME

As part of its gender-transformative approach, the Sustainable Wildlife Management (SWM) Programme has begun integrating positive masculinity into capacity-building efforts across several sites. Gender analyses conducted throughout the Programme revealed consistent patterns: although men and women both access land and natural resources, men continue to dominate decision-making, leadership roles, and control over forests and wildlife. In response, the Programme is delivering targeted gender training for project staff and community members on positive masculinity and the redistribution of domestic workloads, encouraging men to reflect on gender norms and actively support women's participation in project activities.

These efforts are complemented by awareness raising within communities to promote women's leadership in wildlife governance and by income-generating initiatives, such as poultry farming in Namibia, fish farming in Zimbabwe, community gardens in Botswana, and the farming of an edible insect called Sakondry in Madagascar, which require joint planning and shared responsibilities within households. By engaging men as allies and shifting attitudes around gender roles, the Programme is fostering more equitable and supportive environments for women's empowerment. These early initiatives illustrate how positive masculinity can strengthen community cohesion, enhance governance, and contribute to more inclusive and sustainable wildlife management. To date, the SWM Programme has directly engaged over 10 000 women across 82 communities spanning three continents, empowering them to take active roles in sustainable wildlife management and biodiversity conservation.

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FROM EVIDENCE TO ACTION
THE 4 WINS APPROACH

This paper builds on the results and lessons learned from impact assessments and participatory initiatives conducted within the FAO Forestry Division, including a major multi-stakeholder event, "Women's entrepreneurship in forestry: Challenges and opportunities", held in February 2024.[29] These initiatives, which brought together representatives from governments, civil society, academia and the private sector, have generated valuable evidence on how to address gender gaps in forest management, overcome structural barriers, and strengthen women's entrepreneurship across forest value chains.

THE FAO FORESTRY DIVISION

The FAO Forestry Division promotes and implements gender-responsive resilience and participation in forest management, and ensures that comparative sex-disaggregated data are produced and disseminated through knowledge products. At the policy and strategic level, the Forestry Division works closely with governments to support policymakers to review and strengthen laws and legal frameworks in the forest sector to ensure gender responsiveness.

FOR MORE INFORMATION:
https://www.fao.org/forestry/our-focus/forests-people/gender-and-forestry/en

Building on this experience, the FAO Forestry Division developed the **4 WINS approach** designed to enhance women's entrepreneurship, leadership and gender equality in the forest sector. The framework identifies four interlinked pathways that together create the enabling conditions for women to thrive as entrepreneurs, innovators and stewards of sustainable forest landscapes:

- Wider access to markets, financial resources and decision-making for improved livelihoods.
- Innovation for enhanced productivity and efficiency.
- Natural resources conservation and restoration for protected biodiversity and ecosystem services.
- Sustainable Practices: Healthy forests through women's leadership.

[29] The aim of the workshop was to stimulate collective reflection on the obstacles to enabling factors of women's socio-economic empowerment in the forest sector. The workshop explored women's needs, priorities and capacities, and collected concrete suggestions and proposals on strengthening women's roles and promoting stronger female entrepreneurship along the forest sector value chains.

This paper invites governments, financial institutions and development partners to adopt and implement the 4 WINS approach within their forest-related policies, investment frameworks, and entrepreneurship programmes. By embedding the principles of the 4 WINS approach into strategies and development plans, stakeholders can amplify women's contributions and unlock new market opportunities to deliver social, economic and environmental gains.

4 WINS

W Wider access to markets, financial resources and decision-making for improved livelihoods

Ensuring women's effective inclusion in forest-based value chains, together with their equitable access to information, markets, financial resources and decision-making spaces, is essential to diversify income sources and strengthen livelihoods.

The experience of the Rajakot Multi-purpose Cooperative in Dangisharan, Nepal shows how inclusive approaches in forest-based businesses can widen market access and economic opportunities for Indigenous Peoples, Dalits, youth and women. By commercializing *Sal leaf plates*, bamboo handicrafts and *Dhakiya*[30] weaving as household-level enterprises, the cooperative, supported by FFF, has engaged 708 participants (371 women and 337 men) and boosted women's production capacities; for example, Sal plate output increased from 2 000 to 6 500 units per month. Women's average monthly income rose from 1 200 to 5 000 Nepalese rupees,[31] and their role in household financial decision-making increased from 35 percent to 75 percent. At the cooperative level, women's representation in leadership grew from 42 percent to 57 percent, illustrating how inclusive, forest-based value chains can expand access to markets, financial resources and decision-making power for marginalized producers.

While progress is evident, women entrepreneurs in forestry still face persistent structural barriers, such as limited infrastructure, restricted access to finance and inadequate training opportunities, which hinder their ability to grow, innovate and compete in higher-value market segments. Addressing these barriers with policy support and investments is not only essential for gender equality, but also offers a strategic opportunity for policymakers to unlock untapped economic and environmental potential. Targeted measures that expand women's access to finance, infrastructure and capacity-building programmes are critical to levelling the playing field and unlocking the full potential of women-led forest enterprises.

An example of institutional innovation comes from Costa Rica, where the National Forestry Financing Fund (FONAFIFO), through its Gender and REDD+ Action Plan, introduced the Gender Equality Award for Productive Units (GIGUP). By linking financial support with gender-responsive practices, these awards provide incentives for women's entrepreneurship in forestry and demonstrate how national financing mechanisms can effectively mainstream gender considerations into forest

[30] Dhakiya refers to a traditional handwoven mat craft from Nepal, often made by Tharu women from local grasses as a symbol of tradition and bridal gift.
[31] USD 8.3 to USD 34.7, as of December 2025.

governance. The GIGUP supports Costa Rica's commitments to gender equality and women's empowerment by identifying and addressing drivers of inequality at the level of productive units. This includes examining gender roles within households and production, access to and control of resources such as land, and the distribution of power across family and productive spheres. The award not only highlights areas for change toward a more just and equitable society, but also calls on governments, donors, financial institutions and the private sector to invest in and support productive family units that hold the GIGUP.

For award winners, benefits include access to fresh financial resources, such as new public or private investment, and improved market opportunities. For example, the award helps decouple payments for environmental services from land ownership and connects producers directly with consumers, thereby enhancing recognition of gender equality, fair trade and equitable practices.

Similar models have also emerged in other sectors that could inform future financing approaches for women in forestry. For instance, The Better Cotton Initiative's Growth and Innovation Fund (GIF), previously known as the Fast Track Fund, channels private-sector partners investments into a fund managed by the Dutch Sustainable Trade Initiative (IDH). These contributions are then matched by additional investments from other private and public-sector partners such as Rabobank, the International Cocoa Organisation (ICCO) and IDH, and the combined resources go directly to farmer training and improvement programmes.

I Innovation for enhanced productivity and efficiency

Women are powerful engines of innovation in forestry – not only because they adopt new technologies, but also because they generate social innovations that reshape how communities manage resources, organize production, and solve problems collectively.

Due to women's intimate knowledge of forest ecosystems, combined with their central role in household provisioning and community cohesion, they have a unique capacity to identify emerging challenges and design context-specific solutions. Innovation, here, goes beyond technology: it includes new ways of organizing, cooperating, sharing knowledge and transforming social norms.

Innovation can take many forms: it "consists of doing something new and different, whether solving an old problem in a new way, addressing a new problem with a proven solution, or bringing a new solution to a new problem". Women contribute across all these dimensions. They lead community-based restoration, develop new value-added products, establish informal learning networks, and initiate forms of collective action that make value chains more inclusive and resilient. These social innovations are as transformative as technological ones because they shift behaviours, decision-making structures, and power relations within households, organizations and markets.

Despite this potential, women continue to face structural barriers that limit their capacity to innovate. Restricted access to digital tools and renewable technologies, inadequate opportunities for technical training and financing, and persistent gender biases reduce both technological and social innovation. These constraints prevent many women from adopting efficient processing equipment,

leveraging digital finance or scaling their forest-based enterprises. Without targeted action, these barriers slow down both environmental innovation and the behavioural changes required for sustainability.

Creating the enabling conditions for innovation requires investing in gender-responsive innovation ecosystems. This includes: establishing mechanisms for intergenerational exchange that link women's traditional ecological knowledge with the digital and entrepreneurial skills of younger generations; strengthening competencies in organizational management, climate-smart production and digital finance; and building collaborative platforms that connect women's cooperatives with youth innovators, researchers, extension agents and private sector actors. These platforms accelerate the diffusion of technologies and support continuous learning.

In addition, institutions and producer organizations must be adapted to local contexts and trained in more flexible, participatory and socially responsive ways. This entails tailoring capacity development to local realities, languages and time constraints; promoting peer learning and mentoring; and embedding behaviour change approaches that tackle discriminatory norms, decision-making dynamics and unequal care burdens. Expanding digital inclusion, particularly mobile internet access, together with training in entrepreneurship, leadership, organizational development and financial literacy, can unlock women's potential as innovators and leaders in sustainable forestry and forest-based value chains.

In Zambia's Southern Province, the Masopo Women's Club supported by FFF introduced mobile money kiosks and a savings and lending scheme to expand access to financial services in remote areas, increasing their capital base by 600 percent. Women now lead financial operations, manage mobile platforms, and reinvest income from digital ventures into agroforestry, orchard planting and household needs. By combining mobile banking with basket weaving and value-added forest products, the group diversified its revenue streams and strengthened resilience. Training in risk management, governance and digital tools further improved efficiency and confidence. Their experience shows how initiatives that engage women and young women in forestry enable them to bring new skills back to their communities, enhancing local expertise, driving innovation, and inspiring the next generation of forest leaders.

N Natural resources conservation and restoration for protected biodiversity and ecosystem services

Women play a pivotal role as custodians of biodiversity and forest ecosystems, drawing on traditional knowledge, practical experience and a deep connection to nature.

Across forest-dependent communities, women are leaders in the gathering and sustainable use of forest products, applying practices passed down through generations, which is an invaluable contribution to both ecological balance and cultural heritage. Indigenous women, in particular, stand at the frontline of restoration and conservation, ensuring ecosystem resilience and strengthening community adaptation to climate change.

The chakra agroforestry systems[32] of the Ecuadorian Amazon strongly illustrate how branding and marketing initiatives that highlight the **cultural and ecological value of Indigenous women's products** can elevate women's economic and cultural status. Supported by FAO's FFF, the Chakra Amazonia label promotes not only individual products, but also the biocultural heritage and sustainability of the chakra system as a whole. Services such as organic certification, business development and branding are creating new opportunities for women's empowerment while reinforcing their role in land restoration.

In Brazil's Espinhaço Range, the association Apanhadores de Sempre-Vivas (CODECEX) brings together flower-gathering communities where women lead in sustaining traditional agro-silvopastoral systems adapted to semi-arid conditions. Their ecological knowledge, especially in seed conservation, medicinal plants and sustainable flower harvesting, supports biodiversity, food security and climate resilience. Through CODECEX, women have organized dried floral crafts for export, generating income while conserving native species. Many now lead associations and engage in land governance, advocating for land rights, training and fair markets. Despite widespread illiteracy among elders, intergenerational collaboration has enabled inclusive leadership.

Similarly, in Senegal's River Delta, the "Strengthening expertise in Sub-Saharan Africa on birds and their rational use for communities and their environment" (RESSOURCE +) project, under the Sustainable Wildlife Management (SWM) Programme, converted abandoned rice fields into restored wetlands by re-establishing white water lily cultivation, linking agricultural innovation with traditional knowledge and ecosystem recovery. Restoration actions include controlling invasive Typha, managing gravity-fed water and dikes, and testing sustainable harvest protocols on pilot plots to recover habitat for waterbirds while ensuring viable production. By valorizing water-lily seeds, which provide 350–375 kcal per 100 g, the project creates nutrition and income incentives that reinforce conservation outcomes. Women, who lead seed harvesting and processing, are central to this work: they make up 59 percent of participants in meetings and decision-making, and 47 percent of total beneficiaries. Annual Water Lily Day campaigns further mobilize communities and authorities, sustaining stewardship and showcasing how inclusive restoration and value chain development can deliver biodiversity gains and resilient livelihoods.

Intergenerational knowledge transfer from elderly to younger women, and intercultural exchange among communities further enhance biodiversity conservation. Programmes that combine socio-ecological training, field schools, exchange visits and internships promote learning and empower women to value and protect their natural resources. Carbon credit mechanisms can also support scholarships for rural youth, especially women, who study abroad and return to strengthen community-based forest management. For example, the W+ Standard[33] has been applied in Ghana

[32] The chakra (or chacra) system in Ecuador is an ancestral Indigenous agroforestry practice of Kichwa communities in the Amazon and Andean regions. It blends food production, regenerative techniques and cultural knowledge, functioning as both a livelihood system and a territorial space where production, identity and knowledge transmission intersect. In Amazonian chakras, women (chakramamas) manage and teach the system, cultivating a wide diversity of species—from staple crops (cassava, plantain, maize) to commercial products (fine-aroma cocoa, guayusa, coffee), fruits, medicinal plants and timber species. In the Andean chakras, diverse crops are grown across different altitudes, supported by soil-enhancing practices such as maintaining soil life, linking cropped and wild areas, using herbal pest-control preparations and applying strategic crop rotations. For further information, see Regions4, 2025; and FAO, n.d.

[33] W+™ Standard, developed by WOCAN, is a certification framework that measures and monetizes six key domains of women's empowerment (time, income, education and knowledge, health, food security and leadership) within climate and development projects.

by certifying women's empowerment outcomes in shea nut cooperatives, where women's increased income and leadership in the value chain are measured and monetized to generate premium payments that fund community projects and strengthen gender equity. Continuous education and awareness raising on gender and development policies enable women to exercise their rights, access productive resources, and lead sustainable livelihoods.

S Sustainable Practices: Healthy forests through women's leadership

Women are key drivers of sustainable forest management and climate adaptation. Their long-term perspective and deep understanding of forest ecosystems translate into practices that sustain biodiversity, enhance resilience, and strengthen rural economies.

In many rural communities, women are responsible for up to 60 percent of seed collection and storage, safeguarding genetic diversity and ensuring forest regeneration across generations. Through their engagement in seed banking, traditional agroforestry and community forest management, women contribute directly to forest adaptation and the health of ecosystems.

Women-led initiatives focused on NTFPs generate both ecological and economic benefits. Building on their deep ecological knowledge and traditional forest management practices, women are also key actors in the emergence of green and circular value chains. Their skills in identifying, harvesting and processing climate-resilient species, such as of wild foods, medicinal plants and sustainable fibres, position them as central contributors to low-emission, biodiversity-friendly forest economies. Women's expertise in value addition, quality control and product diversification strengthens green markets while ensuring that forest products are harvested sustainably. As demand grows for traceable, ethical and climate-smart goods, women's leadership in green value chains becomes a strategic asset for both climate mitigation and local livelihood resilience. In Zambia, for instance, women's cooperatives organize the sustainable production and marketing of honey, shea butter, and baobab, promoting responsible resource use while strengthening household income. Participating families earn, on average, 35 percent of their total income from NTFPs, underscoring the importance of the sector for rural, forest-dependent communities. In Cameroon, women who participated in green business training increased their profits from NTFPs by 40 percent,[34] demonstrating the value of investing in women's entrepreneurial and technical capacities. Women's groups in Malawi are applying Integrated Food and Energy Systems to restore land, reduce reliance on forest fuelwood, and strengthen local resilience. By intercropping maize with pigeon pea, a drought-tolerant legume that fixes nitrogen in the soil, farmers improve soil health, increase food production, and reduce the need for chemical fertilizers. In addition, pigeon pea stalks serve as an alternative source of cooking fuel, decreasing time spent collecting firewood and easing pressure on protected forests. Supported by the FAO-led GEF-7 Dryland Sustainable Landscapes Impact Program, these practices demonstrate how gender-responsive solutions can deliver both environmental and socio-economic benefits across dryland forest landscapes.

[34] FAO, 2022c.

The European Union's Directorate-General for European Civil Protection and Humanitarian Aid Operations-(DG ECHO) funded project, "Greening the humanitarian response in displacement settings", implemented by FAO in close collaboration with the United Nations High Commissioner for Refugees (UNHCR) and partners in Somala, Djibouti, United Republic of Tanzania and Uganda, ensured gender and age-responsive support across displacement settings. In Somalia, programming was shaped by feedback from vulnerable groups, including female-headed households, widowers, youth, the elderly and people with disabilities, informed by surveys of over 1 000 households per district and strong sex-disaggregated data. In United Republic of Tanzania, gender quotas, flexible training and community engagement helped women, youth and at-risk groups access clean energy, agroforestry and forest governance. In Djibouti, 95 percent of cookstove recipients and up to 35 percent of tree beneficiaries were women. In Uganda, stove distribution reached female-headed households, with youth engaged in sustainable energy. The project met gender and age marker standards, demonstrating inclusive and effective delivery.

Ensuring the sustainability of these practices requires creating an enabling environment that strengthens women's roles as agents of ecological restoration and innovation. This includes equitable access to land and productive resources, targeted investments in care infrastructure, and supportive policies that recognize women not just as beneficiaries, but also as leaders in sustainable forestry.

By leading associations, participating in local governance, and advocating for land rights, women have become active decision makers in resource management. Their leadership ensures that conservation practices are rooted in equity, resilience and cultural heritage, demonstrating that empowering women is essential for healthier forests, stronger communities and sustainable biodiversity protection.

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2.1 Billion people
depend on **forests** globally

3x unpaid care work
of **women** vs men

1 Billion women
depend directly on **forest resources**

USD 1T global GDP increase
from closing **gender gaps**

60% seed collection and storage
carried out by **women** in rural communities

10k women farmers
supported **worldwide** by the **FAO Mountain Partnership**

59% women
in decision-making roles in Senegal within the **RESSOURCE+ Project (SWM Programme)**

200+ women-led organizations
connected by the **WeCaN initiative** in **32 countries**

708 producers in Nepal
in 2 years engaged with support of the **Forest and Farm Facility**

4x average monthly income increase for **women**

CONCLUSION

INNOVATING FOREST ECONOMIES
WOMEN DRIVING TRANSFORMATION ACROSS VALUE CHAINS

Unlocking women's skills, knowledge and leadership across forest value chains is not only a matter of justice; it is a strategic investment in resilient ecosystems, inclusive economies and global climate goals. Evidence throughout this publication demonstrates that when women have secure tenure, financial opportunities and meaningful participation in decision-making, they drive more sustainable, equitable and biodiversity-friendly forest management.

However, delivering this transformation requires more than isolated interventions; it demands systemic and structural change, rooted in gender-transformative approaches that dismantle discriminatory norms, redistribute unpaid care work, and address the power imbalances that shape who has access to land, markets, information, technologies and leadership roles. Without tackling these informal institutions and social norms, even the strongest policies, financing mechanisms and capacity-building initiatives will achieve only partial impact.

In addition, innovation and technology are emerging as powerful equalizers. Digital tools, renewable energy solutions, mechanization and climate-smart technologies can reduce women's drudgery, expand their access to markets and financial services, enhance product quality, and enable them to enter higher-value segments of forest value chains. When women and young women are equipped with digital skills and supported by inclusive innovation ecosystems, they become catalysts for local transformation, linking traditional ecological and cultural knowledge with modern technologies in ways that strengthen resilience and accelerate sustainable forest economies.

Yet, technological and gender-responsive innovations cannot be scaled up without supportive governance and coordinated investment. Effective integration of gender equality across forest value chains requires cross-sectoral and interministerial collaboration, linking ministries responsible for agriculture, forestry, land, social affairs, economic development, finance and the environment. This coordination is essential to address structural bottlenecks, such as inadequate rural infrastructure, barriers to market access, weak extension systems and fragmented institutional mandates, that

disproportionately restrict women's economic participation. Aligning policies, budgets and governance mechanisms across sectors creates the enabling environment women need to innovate, access larger and more profitable markets, and lead sustainable forest enterprises.

To realize this vision, action by policymakers and practitioners is needed on several fronts:

- **Apply gender-transformative approaches (GTAs)** in the forest sector and forest-based entrepreneurship that go beyond participation to explicitly address and shift unequal gender power relations. GTAs work at multiple levels – individual, household, community, institutional and policy – to tackle the structural, cultural and legal barriers that constrain women's agency and leadership across forest value chains, cooperatives, producer organizations and enterprises. This involves challenging discriminatory social norms, unequal decision-making processes, institutional biases and legal constraints that shape who controls land, benefits, technologies and market opportunities. It also requires engaging men, youth, traditional leaders and local institutions as active partners in redefining gender roles and promoting shared responsibilities. By transforming the informal and formal rules that govern resource access, labour distribution and leadership opportunities, GTAs create the enabling conditions for women to secure tenure, access to and control over resources, start and grow businesses, lead organizations, and participate in and influence governance processes. Strengthening women's power and agency in this way contributes directly to more inclusive forest economies, equitable value chains and sustainably managed forest landscapes.

- **Ensure equitable access to land, forests and natural resources** by advancing comprehensive legal and institutional reforms that guarantee women equal and secure tenure and use rights. In line with the 2030 Agenda for Sustainable Development (Sustainable Development Goal 5.a), this requires the formal recognition of women's ownership, management and inheritance rights not only over individual plots and forestlands, but also over common and shared natural resources such as water sources, rangelands and pastures, fisheries, wildlife and NTFPs. This can be supported through joint or long-term titling, community-based and collective tenure arrangements, and inclusive governance structures in cooperatives, producer organizations and natural resource user groups. Evidence shows that when women's land and natural resource rights are protected, entire communities benefit, since women tend to invest a higher share of agricultural, pastoral and forestry income in family well-being, climate-resilient livelihoods and sustainable resource management. In addition, customary and statutory tenure systems must be harmonized: where traditional practices already recognize women's rights (e.g. hereditary land for widows or access rights to communal water points and grazing lands), they should be codified and reinforced, and discriminatory local norms revised. Targeted awareness raising and capacity development at the local level through information campaigns, public dialogues and training for civil, religious and traditional authorities, as well as for male and female community members can significantly increase recognition and enforcement of women's tenure and resource-use rights. Women's organizations, Indigenous women's groups and local networks play a crucial role in this process by building mutual support, coordinating advocacy and monitoring efforts within land, forest and natural resource governance systems, and pushing institutions to adopt more inclusive policies. Finally, strengthening women's legal empowerment, including through

public-private partnerships for legal assistance and the promotion of co-ownership, co-registration and gender-responsive dispute resolution mechanisms, is essential to translate statutory reforms into tangible, long-term gains for gender-equal and sustainable community development.

- **Strengthen women's access to gender-responsive advisory and financial services, entrepreneurship and innovation skills and appropriate forest-sector technologies.** This entails: (i) designing and scaling financial products tailored to women-led forest and farm enterprises, such as dedicated credit lines, savings groups, guarantee schemes, blended finance and results-based payments; (ii) providing structured capacity development on business planning, market analysis, negotiation, digital and financial literacy, organic certification, risk management, and compliance with sustainability and certification standards; (iii) integrating women-focused modules and targets into public and private extension services, cooperatives and producer organizations; and (iv) promoting labour-saving, climate-resilient and digital technologies (e.g. improved processing equipment, mobile banking, e-commerce platforms, digital advisory apps) that respond to women's time and mobility, and expand market opportunities. Combined, these measures enhance women's productivity, bargaining power and leadership in forest value chains, cooperatives and enterprises, and support their shift from lower nodes of the value chain to higher-value segments, contributing fully to more inclusive forest economies.

- **Recognize and redistribute unpaid care and domestic work** to enable women's full engagement in forest-based livelihoods and enterprises. Unpaid care work is a cornerstone of household and community functioning, yet it remains largely invisible in policy and project design. Acknowledging it as productive labour is essential to addressing the structural time and mobility constraints that limit women's engagement in forest management, training and entrepreneurship. Reducing care burdens through labour-saving technologies and infrastructure (transport, storage, processing facilities, water and energy), community-based childcare and health services enables women to allocate time to income-generating and leadership activities. Equally important is promoting a more equitable division of responsibilities within households and communities, supported by behaviour change approaches that challenge restrictive gender norms. These dimensions need to be considered in the design of forestry initiatives to ensure that women can fully participate, receive tailored inputs and learning resources, and be effectively engaged in decision-making and economic roles.

- **Foster collective action and market linkages** through peer-to-peer networks, women's associations, and partnerships with cooperatives, non-governmental organizations, government agencies and private sector actors. Strong women-led associations improve access to information, inputs, technologies, certification schemes and financial services while enabling coordinated production, aggregation and marketing. In addition, by creating reliable linkages with fair-trade, green and conscious consumer markets, the visibility and value of women's forest products are increased, which helps them secure better prices and enter higher-value segments of the value chain. Crucially, robust women's networks and producer groups serve as the backbone of gender-responsive forest economies: they facilitate rapid information flow, foster mutual learning and accountability, and ensure that

gender-responsive policies and innovations are actually implemented and sustained on the ground. By anchoring knowledge, building collective bargaining power, and strengthening women's voice across institutions and markets, these networks transform individual gains into systemic, lasting change.

By integrating these priorities through the 4 WINS approach, stakeholders can align gender-transformative change with sustainable forest management, ensuring that forest value chains become truly equitable, resilient and transformative for both people and ecosystems.

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